



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,153	08/31/2000	Peretz Moshes Feder	2925-434P	2613

30594 7590 11/20/2003

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 8910
RESTON, VA 20195

EXAMINER

NGUYEN, DUSTIN

ART UNIT	PAPER NUMBER
----------	--------------

2154

DATE MAILED: 11/20/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Am

Office Action Summary

Application No.

09/652,153

Applicant(s)

FEDER ET AL.

Examiner

Dustin Nguyen

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-14, 18-20 and 24 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 15-17 and 21-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2154

DETAILED ACTION

1. Claims 1-24 are presented for examination.

Allowable Subject Matter

2. Claims 5, 6, 15-17, 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Objections

3. Claim 1 is objected to because of the following informalities: "method" on line 1 [i.e. it should be written as "A method". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2154

5. Claims 4-6, 12-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following is not clearly understood:

I. As per claims 4 and 12, the term "formulaically" is not clearly explained.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4, 7, 8, 12-14, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. [US Patent No 6,285,662], in view of Gummalla et al. [US Patent No 6,614,799].

8. As per claim 1, Watanabe discloses a method of transmitting data over a medium, the method comprising the step of:

obtaining a back-off delay window for retransmitting a data packet [col 8, lines 17-24], the back-off delay window obtained being based upon a number of unsuccessful transmissions of the data packet or a predetermined initialized value [col 5, lines 43-46; and col 8, lines 36-46].

Watanabe does not specifically disclose the obtained back-off delay window is less than two times a preceding back-off delay window.

Gummalla discloses the obtained back-off delay window is less than two times a preceding back-off delay window [Abstract; and col 6, lines 60-64].

It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Watanabe and Gummalla because Gummalla's teaching of back-off delay window would allow Watanabe's system to select a contention window that can reduce delay in network retransmission.

9. As per claim 4, Watanabe discloses the obtained back-off delay is determined formulaically [col 10, lines 33-45; and col 11, lines 46-60].

10. As per claim 7, Watanabe discloses method of transmitting data over a medium, the method comprising the step of:

obtaining a back-off delay window for retransmitting a data packet [col 8, lines 17-24], the back-off delay window obtained being based upon a number of unsuccessful transmissions of the data packet or a predetermined initialized value [col 5, lines 43-46; and col 8, lines 36-46].

Watanabe does not specifically disclose the obtained back-off delay window is equal to a preceding or future back-off delay window.

Gummalla discloses the obtained back-off delay window is equal to a preceding or future back-off delay window [col 7, lines 15-20 and lines 41-43].

It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Watanabe and Gummalla because Gummalla's teaching of back-off delay window would allow Watanabe's system to select a contention window that can reduce delay in network retransmission.

11. As per claim 8, Watanabe discloses the preceding back-off delay window is a back-off delay window which occurred immediately prior to the obtained back-off delay window [col 11, lines 60-65].

12. As per claim 12, it is rejected for similar reason as stated above in claim 4.

13. As per claim 13, Watanabe disclose the formula for determining the obtained back-off delay contains a function for converting a non-integer value to an integer value [col 5, lines 26-29].

14. As per claim 14, Watanabe discloses the function converts the non-integer value to a smallest integer value which is greater than the non-integer value [col 11, lines 53-54].

15. As per claim 18, Watanabe discloses a method of transmitting data over a medium, the method comprising the steps of:

transmitting a data packet without contention [col 3, lines 51-55].

Watanabe does not specifically disclose decreasing a back-off delay window for transmitting a next data packet, the decreased back-off delay window resulting in an obtained back-off delay window being greater than a smallest back-off delay window, and wherein the decrease in the back-off delay window is based upon a variable integer value or an predetermined value.

Gummalla discloses decreasing a back-off delay window for transmitting a next data packet, the decreased back-off delay window resulting in an obtained back-off delay window being greater than a smallest back-off delay window, and wherein the decrease in the back-off delay window is based upon a variable integer value or an predetermined value [col 8, lines 32-50].

It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Watanabe and Gummalla because Gummalla's teaching of back-off delay window would provide a dynamic method to determine back-off window value according with the network traffic.

16. As per claim 19, Watanabe discloses if the obtained back-off delay window is less than a predetermined minimum back-off window, the obtained back-off delay window is set equal to a predetermined minimum back-off window [col 9, lines 33-53].

17. As per claim 20, Watanabe discloses the obtained back-off delay window is found by subtracting two from a variable value corresponding a number of unsuccessful transmissions of a

Art Unit: 2154

previously transmitted data packet, the resulting difference is then applied to a formula to generate the obtained back-off delay window [col 11, lines 53-56].

18. Claims 2, 3, 9-11, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. [US Patent No 6,285,662], in view of Gummalla et al. [US Patent No 6,614,799], and further in view of Shaffer et al. [US Patent No 6,172,983].

19. As per claim 2, Watanabe and Gummalla do not specifically disclose the obtained back-off delay window is found using a lookup table. Shaffer discloses the obtained back-off delay window is found using a lookup table [Figure 1]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Watanabe, Gummalla and Shaffer because Shaffer's teaching of lookup table would allow to manage data transmission collisions such that a high network throughput and a low network latency are achieved in a cost efficient manner [Shaffer, col 3, lines 24-30].

20. As per claim 3, Shaffer discloses the lookup table comprises predetermined back-off delay window values determinable based upon a number times a given data packet is unsuccessfully transmitted [Figure 1; and col 5, lines 1-7].

21. As per claim 9, Watanabe and Gummalla do not specifically disclose the future back-off delay window is a back-off delay window which occurs immediately following the obtained

Art Unit: 2154

back-off delay window. Shaffer discloses the future back-off delay window is a back-off delay window which occurs immediately following the obtained back-off delay window [col 6, lines 36-39]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Watanabe, Gummalla and Shaffer because Shaffer's teaching would allow to increase system performance.

22. As per claim 10, it is rejected for similar reason as state above in claim 2.

23. As per claim 11, it is rejected for similar reason as stated above in claim 3.

24. As per claim 24, Watanabe discloses the obtained back-off delay window is found by subtracting two from a variable integer value corresponding the number of unsuccessful transmissions of a previously transmitted data packet [col 11, lines 53-56]. Watanabe and Gummalla do not specifically disclose the resulting difference is then applied to a lookup table containing back-off delay window values to thereby reference a corresponding back-off delay window. Shaffer discloses the resulting difference is then applied to a lookup table containing back-off delay window values to thereby reference a corresponding back-off delay window [Figure 1; and 104, Figure 5]. It would have been obvious to a person skill in the art at the time the invention was made to combine the teaching of Watanabe, Gummalla and Shaffer because Shaffer's teaching would provide an effective way to control retransmission traffic.

Art Unit: 2154

25. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dustin Nguyen whose telephone number is (703) 305-5321. The examiner can normally be reached on Monday – Friday (8:00 – 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directly to the receptionist whose telephone number is (703) 305-3900.

Dustin Nguyen



**MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**